

08/14/01 #45 with 9/20/02  
OKCO  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: NEVILLE, RICHARD  
Application No.: 09/900,310  
Filing Date: 07/06/01  
For: ON SCREEN DISPLAY  
Art Unit: UNKNOWN



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Dear Sir:

Enclosed herewith is a certified copy of British Patent Application No. 0017159.5 for which the above-identified patent application claims priority from.


If, for any reason, this priority document is not acceptable, please inform the undersigned as soon as possible.

Respectfully Submitted

HEAD, JOHNSON & KACHIGIAN

Date: 08/14/01

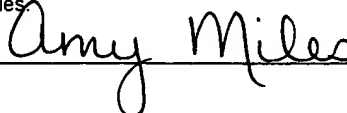
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GW-G30236

13/07/00 E552512-1 000346

POL/7700 0.00-0017159.5

2. Patent application number  
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0017159.5

13 JUL 2000

3. Full name, address and postcode of the or of  
each applicant (underline all surnames)

Pace Micro Technology Plc

Victoria Road  
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Shipley  
BD18 3LF

7588569001

Patents ADP number (if you know it)

If the applicant is a corporate body, give the  
country/state of its incorporation

U.K.

4. Title of the invention

On Screen Display

5. Name of your agent (if you have one)

Bailey Walsh &amp; Co.

"Address for service" in the United Kingdom  
to which all correspondence should be sent  
(including the postcode)5, York Place  
Leeds  
LS1 2SD

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224801

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Priority application number  
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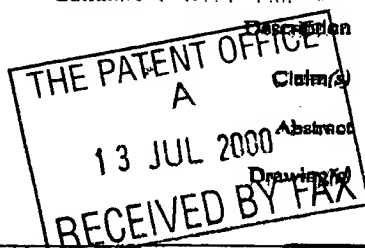
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Request for substantive examination (Patents Form 10/77)

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### On Screen Display

The invention to which this application relates is for use particularly, although not necessarily exclusively with respect to a broadcast data receiver which is provided in a premises for the reception of data broadcast from a remote location and transmitted via any of satellite, cable or terrestrial transmission systems.

In a new form of broadcast data receivers there is provided a memory device such as a hard disk drive (HDD) upon which received data can be stored for subsequent retrieval. The broadcast data receiver, in addition to receiving the data is provided with processing means to enable the received data to be processed to generate video, audio and/or auxiliary services which are representative, in one mode of operation, as television programmes and which are displayed via a display screen such as that of a television set. The receiver can process the data upon reception or from storage in the HDD.

A problem with the storage of the data in the HDD is that upon subsequent user activation of the HDD it is difficult for the user to ascertain whether the HDD is active and, if so, what the same is doing. The applicant's co-pending application number 0010675.7 refers to a system whereby a display is generated which can comprise a series of segments which can be selectively illuminated and/or illuminated in sequence. The illumination and/or sequence of illumination is controlled to indicate particular, identifiable functions of the HDD to the user.

The aim of the present application is to further or alternatively indicate to the user the activity of the memory device and

thereby prevent the user from becoming concerned as to whether the apparatus is operating correctly, or at all.

In a first aspect of the invention there is provided a broadcast data receiver, said receiver including recording media on which received data can be stored for subsequent, selective retrieval, control means for controlling the operation of the recording media, processing means for the processing of the received data to generate video and/or auxiliary data for display on a display screen and wherein the receiver further includes a means to generate a display on screen, said display generated upon the user selection of one of a range of operating functions of the said recording media and to indicate to the user that the recording media is performing a function.

Typically the recording media is a hard disk drive and the display is generated on screen when any of play, record, search or other user operable functions are selected for the control means of the hard disk drive. Typically the display is generated at the time of the user selection, or a predesignated time thereafter and the display is stopped at the end of the user selected function.

The display is preferably generated on screen in a "window" so that other video or auxiliary data can still be viewed on the screen.

In one preferred embodiment, at the time of generation of the display, the time required for completion of the selected function is calculated and the display alters during the passage of the calculated time to indicate the stage at any instant with respect to the start and/or completion of the selected function.



## 3

A specific embodiment of the invention is now described with reference to the accompanying diagram; wherein:-

Fig. 1 illustrates one example of the display which is generated in accordance with the invention.

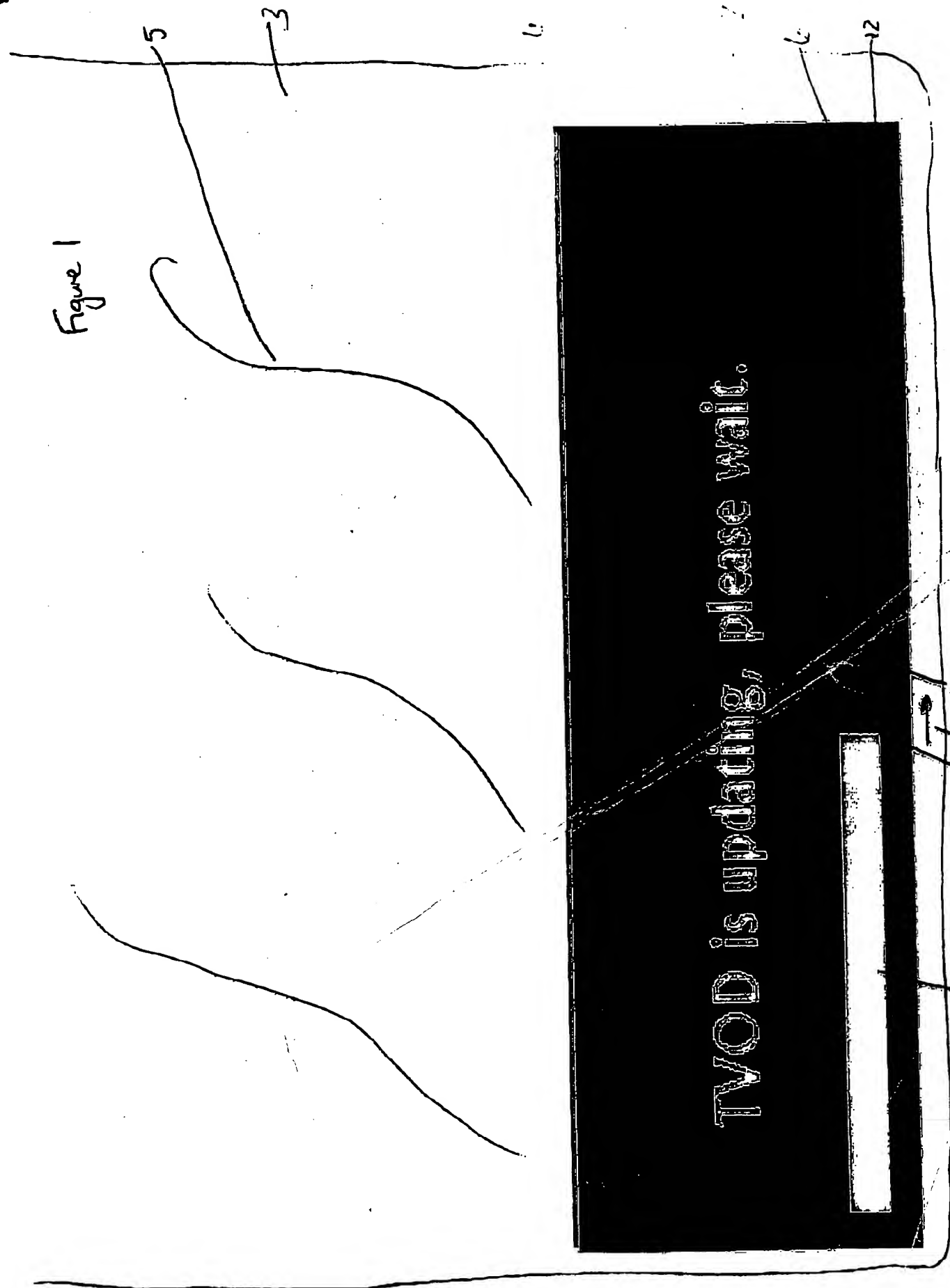
Referring to Fig. 1 there is illustrated a window display 2 of the type which can be generated on a display screen 3, partially shown, at a particular location on the display screen such as the bottom, top or wherever suited and which allows video 5 which has already been displayed on the display screen to still be at least partially viewable. The window display comprises text 4 which illustrates to the user the subject matter of the information being displayed in the window, in this case relating to a particular video service, and to the status of a recording medium which is part of the apparatus for generating and processing video. A bar 6 is also illustrated which has two portions with colour contrast, 8, 10. The length of the time bar 12 illustrates the length of time for a particular operation of the hard disc drive to be completed. The length of the portions 8, 10 changes during time, indicated by line 14 and arrow 16 to illustrate the particular time taken and time left in the overall time for completion of the function. Thus, the time bar which is generated firstly illustrates to the viewer or user of the apparatus that the hard disc drive is performing the selected function by the user and, secondly, illustrates the time which has elapsed and also the time still required for the function to be performed. The provision of the display prevents the user from believing erroneously that the apparatus is not functioning properly and furthermore, can prevent the user from contacting the service provider and complaining about the apparatus not performing properly. This is especially the case with recording media where, if the user requires a particular function to be performed which requires some time, there may be a delay in the

user selecting the function and the actual function being completed.

It is envisaged that this type of display is particularly of use with regard to broadcast data receivers which includes recording media such as a hard disc drive on which video and/or audio and/or auxiliary data can be stored and from which, selected portions of said data can be retrieved by a user by selecting a particular function of operation of the control means of the hard disc drive. Thus, if the user selects to record data onto the hard disc drive then they can select the record or store function whereby a display can be generated and, for the time bar of that particular display, a calculation is performed, firstly to identify the total time for the function to be performed and thereafter the speed of movement and change in respective lengths of the portions 8, 10 along the time bar is calculated with respect to the total time required for the function and in relation to real time. Thus, the difference and movement of the portions 8, 10 will be faster along the time bar for a function which takes a relatively short period of time and slower for a function which takes a relatively longer period of time.

It is therefore believed that this particular embodiment of an on-screen display with regard to a hard disc drive and/or other recording media is of significant advantage to the user and also to the service provider and forms an alternative or additional display to the display which is described in the applicant's co-pending Application No. 0010675.7.

Figure 1



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